

**REMARKS**

Reconsideration is requested.

Claims 1-10 have been canceled, without prejudice.

Claims 11-26 have been added. The claims find support throughout the specification. No new matter has been added.

The Abstract has been revised to obviate the objection to the same.

Consideration of the attached new Abstract and withdrawal of the objection to the Abstract are requested. The Examiner is requested to advise the undersigned in the event anything further is required in this regard.

The Section 101 rejection of claims 1-3 is moot in view of the above amendments. The amended claims are not directed to "uses", which is believed to be the basis of the Examiner's Section 101 rejection of claims 1-3, such that the pending claims define patentable subject matter.

The Section 112, first paragraph "written description", rejection of claims 1, 4-6 and 8-9 is moot in view of the above amendments. The claims are submitted to be supported by an adequate written description and consideration of the following further comments in this regard is requested.

The Examiner is understood to believe that the applicants have allegedly not adequately described or demonstrated the effects of "prevention", "anti-radical effect" and/or "anti-ageing" of the claims to the extent that one of ordinary skill in the art would believe the applicants were in possession of the claimed invention at the time the application was filed.

The applicants submit, however that the relationships between ageing, antiradical effect and oxidative stress were sufficiently established at the time the present application was filed such that one of ordinary skill in the art would appreciate from the present application and the generally advanced level of skill in the art that the applicants were in possession of the claimed invention.

The Examiner is requested to see, for example, the attached article of Sohal et al. entitled "*Mechanisms of aging: an appraisal of the oxidative stress hypothesis*" (Free Radical Biology & Medicine, Vol. 33, No. 5, pp 575-586 (2002)) which was published in 2002 and provides a review on Oxidative stress and aging. The hypothesis of the role of oxidative stress in aging was well established although additional evidence were needed (abstract). The attached review also explains that the oxidative stress hypothesis, known before as the free radical hypothesis, is based on the fact that Reactive Oxygen Species (ROS) were considered as the main causal factor underlying senescence-associated losses in physiological functions (see page 576 first §).

Consequently in view of this review, illustrating the general knowledge of the one of ordinary skill in the art, the results obtained with the prebiotics used according to the invention and showing that prebiotics are able to decrease oxidative stress due to an over consumption of sugars would lead the ordinarily skilled artisan to conclude that such compounds should be able to have an anti ageing effect and antiradical effect without further demonstration.

The claims are submitted to be supported by an adequate written description.

The objection to claim 2 noted on page 3 of the Office Action dated May 14, 2007 is moot in view of the above.

The Section 112, second paragraph, rejection of claims 1, 2, 4-7 and 10 is moot in view of the above amendments.

The claims are submitted to be definite. The claims relate to oxidative stress due to over consumption of sugars; and they particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims have been revised with the Examiner's comments on page 4 of the Office Action dated May 14, 2007 in mind and the claims are believed to be definite. The Examiner is requested to contact the undersigned however, preferably by telephone, in the event anything further is required in this regard.

The Section 103 rejection of claims 1-10 over Van Loo (Critical Reviews in Food Science and Nutrition, 35(6), 525-552 (1995)) and Beers (Chapter 5 in the Merck Manual of Diagnosis and Therapy, 17<sup>th</sup> Edition, Merck & Co., Inc., Rahway, NJ, January 1999, only title pages and text pages 58-62), is moot in view of the above amendments.

The claims are submitted to be patentable over the cited combination of art and consideration of the following in this regard is requested.

The presently claimed invention defines methods involving mixtures of prebiotics, particularly oligosaccharides, more particularly FOS added into food compositions or pharmaceutical compositions to treat oxidative stress linked to the over consumption of sugars, particularly fructose thus leading to an antiradical and anti aging effect.

Although Van Loo and Beers may disclose the beneficial effect of oligosaccharides for health and recommend to replace lower sugars by complex one in case of diabetes or obesity, neither of the cited documents teach or suggest that

addition of complex sugars to lower sugars could be useful for treating oxidative stress due to said lower sugars.

Van Loo is understood to only deals with the nutritional properties of FOS and Beers is understood to relate to limitation of the caloric intake to decrease obesity.

In Van Loo, table 1 discloses the integrated values of the Gas chromatographic analysis of native chicory inulin, (extracted from freshly harvested roots), commercially available chicory inulin (Raftiline ®) and partial chicory inulin hydrolysate ((Raftilose ®) which contains 85% of oligofructoses and 15 % of lower sugar without describing what kind of oligofructose is used. Tables 6 and 10 of the reference are understood to disclose the contents of inulin respectively in Jerusalem Artichoke and garlic which are not food compositions but food stuffs, whereas table 9 teaches that food processing like roasting and cooking can be used to modify the contents of Inulin and oligofructose of foodstuffs. The applicants believe that none of these data suggest the specific compositions of the presently claimed invention, such as is recited in claims 24-26.

Although oxidative stress, obesity or high blood pressure are all consequences of over consumption of sugars like fructose, the applicants believe that the mechanism leading to such symptoms are completely different: oxidative stress is linked to the formation of free radicals which are responsible of an acceleration of ageing (see attached Sohal *et al.*) whereas obesity is due to an accumulation of adipose cells and hypertension to high sugar concentration in blood.

Even if the reduction of consumption of sugars was known to avoid obesity and diabetes, it would not have been obvious to a person of ordinary skill in the art at the time the invention was made that the reduction could have an anti ageing effect.

RAYSSIGUIER et al.  
Appl. No. 10/539,632  
September 14, 2007  
Amendment

The claims are submitted to be patentable over the cited art.

The claims are submitted to be in condition for allowance and a Notice to that effect is requested. The Examiner is requested to contact the undersigned, preferably by telephone, in the event anything further is required to place the application in condition for allowance.

Respectfully submitted,

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